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ABSTRACT

The study described in this report was conducted to test the connection between patterns of organization and functioning of individual Afro Asian families in Israel and the achievement of their children in formal educational settings. The 177 working class families studied were mostly from Morocco, Iraq, and Iran and lived in neighborhoods considered to be disadvantaged. A family score was calculated for each family, consisting of a numerical expression of the overall academic achievement of all its children. The following components of family life were examined and compared to the family score in order to determine their relationship to children's school performance: (1) life style, including religious self definition and family rituals; (2) organization of space within apartments and privacy allotted to various family members; and (3) organization and use of manpower, including the household division of labor. General findings may be summarized as follows: (1) there is a connection between the organization and functioning of individual families and their children's academic achievements; (2) input of family members in activities directly related to schooling (homework, teacher contact, etc.) has less influence on children's achievement than do other activities less directly related to school; and (3) the more organized and efficient the family unit, the higher the children's achievement in school. (Author/GC)

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FAMILY FUNCTIONING AND CHILDREN'S ACHIEVEMENTS IN SCHOOL

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1979

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INTRODUCTION

The statistical correlation between ethnic origin and success in learning or between S. E. S. and achievements in formal educational settings is now common knowledge. It is usual to try to explain the success or failure of children in the educational process on the basis of our general knowledge about certain ethnic groups, or by extrapolating from knowledge gained concerning the life-style of the various S. E. S. groups.

The findings reported here are based on a pilot study conducted in two Jerusalem neighborhoods which have been defined by the welfare authorities as disadvantaged. We have tried to overcome in this study the application of variables commonly used, such as ethnic origin and/or family background, economic achievement or social status, as explanatory variables for the differences in educational achievement of children, and to look for the specific factors in those variables that play a meaningful part in the educational process.

In this pilot study, we have attempted to arrive at direct relationships between patterns of functioning and forms of organization in a particular family unit and the level of success of its children in the formal educational system. That is to say that the relationship we have investigated is that of a family to its own children, and not that of the whole category of families to all the children in the group.

For the purpose of this study, a population was selected which, according to accepted sociological criteria, would be defined as homogenous. This provided an opportunity to look for latent and more subtle differences in the family's inner structure which might explain the variations in the success of children from different families.

It is important to stress that this is a pilot study, whose main purpose is to test the conceptual approach. Because the study has been carried out on a comparatively small scale and with a limited budget, the only question to which it may provide an answer is whether the general assumption of a connection existing

between family patterns and children's achievements in educational settings has sufficient validity to warrant a broader and more systematic study on the same lines.

I. POPULATION STUDIED

The families studied live in neighoorhoods whose population was chosen as a target population for various "family enrichment" programs in the areas of child-rearing and education.* In particular, the households we visited were selected to participate in an "early age enrichment" study. In accordance with the criteria of this study all sample households contained at least one child who, at the time of this study, was four years of age. Nevertheless, there are considerable differences among these families in terms of their distribution in various phases of the life cycle and in terms of family size.

The number of permanent household members ranged from 3 to 13, the mode being 5 members, the median 6.0 and the mean 6.4 (Appendix, Table I. 1). In 22.6% of the families, there were members who were not living continuously at home, such as children in boarding schools, soldiers posted away from home, etc.** In most of the households, the average density did not exceed the accepted*** standard of 3 persons per room. (Appendix, Table I. 2). The ages of the

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* The families studied constituted the experimental and control groups for the implementation of the "Hippy" Project. The children were selected for the experimental and control groups as a representative sample of all the kindergartens in the neighborhood. See: Lombard, A. D. "Home Instruction Program for Pre-School Youngsters, (Hippy) Final Report." The NCJW Research Institute for Innovation in Education, the Hebrew University of Jerusalem, 1973.

** Throughout this report the "household members" include only its permanent residents.

*** Three people per room is the standard accepted by the Israeli housing authorities, and constitutes the yardstick for planning and allocation of housing for a large part of the population. For more details see: Shamgar-Handelman, Lea and Belkin, Ruth. Space Allocation in Dwelling Units of Families in Jerusalem Neighborhoods; 1977: The NCJW Research Institute for Innovation in Education, School of Education, the Hebrew University of Jerusalem.

parents* ranged from 21 to 60 years, the majority being between 25 and 40 years old; the men were older than the women. (Appendix, Table I.3). A cross-tabulation of the mother's age and the number of children at home (Appendix, Table I.4) emphasizes the different stages of the life cycle of the various families. Among them, there is a group of young families with 2 or 3 children. The number of children increases as the mother's age rises (for mothers between the ages of 31 and 35, the mode is between 4 and 5; for mothers between the ages of 36 and 40, the mode is between 6 and 7). This trend allows us to assume that the young families which today are in the first stages of their life cycle will in time come to resemble the older families.

There is a marked tendency toward stability of marital connection among those studied, and most of the parents were married for the first time (95.4% of the women and 96.5% of the men). One-parent families were quite rare among the population studied and of these, all were female-headed families: 0.6% widowed, 2.8% divorced, and 1.7% separated from their husbands. Also, most adults in the population studied had some formal education (81.2% of the women and 91.2% of the men); the majority did not go beyond elementary schooling. Approximately half of both the men and the women attended school for up to eight years. More women (18.8%) than men (8.9%) had no formal education whatsoever. More men than women had attended school for 9 years or more (men 41.8% and women only 30%). More men were literate in Hebrew (83.5%) than women (64.1%). (See Tables I.5, 6 & 9 of Appendix).

According to their socio-economic resources, most of these families can be termed "working class", although there are variations within this broad rubric.

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*The population studied here includes a wide age-range and a few of the terms used call for clarification:
"parents" or "adults" - these terms refer to male and/or female heads of households;
"children" - this term refers to offspring of these parents, no matter at what age.

Most of the heads of families were salaried workers (86%), while only a minority were self-employed. (Appendix, Table I.7). The majority of these salaried workers (60%) had tenure in their places of employment; only some 8% of the sample families received financial aid from various welfare services.

Of the men, 31.6% and 70% of the women had no professional or vocational training. Most of the men were employed either in blue-collar occupations (as building or factory workers) or as technicians. Of the women, 30% were employed, most of them as cleaning women and a small minority in lower service and clerical positions.

All the families in this study are from Afro-Asian backgrounds, either immigrants to Israel or first generation Israelis born to immigrants from these countries. The principal countries of their origin are Morocco, Iraq and Iran. Most of the parents who came to Israel as immigrants did so soon after the establishment of the State, that is, between 1948 and 1951. However, quite a large group (23.4% of the fathers and 16.5% of the mothers) came later, between 1956 and 1974 (Appendix, Tables I.8 & 9).

In conclusion, and allowing for variations, the population under study constitutes a fairly homogenous group. The differences between the sub-groups are small and relate mainly to the stage in the life cycle of the families, the number of children, the number of years in Israel and minor variations in the educational levels of the mothers and fathers. If these families were part of a representative sample drawn from the whole Israeli population, they would undoubtedly be classified under the same category, a classification which would not be unexpected, since the sample was deliberately selected having in view our interest in the more subtle variations among the families, rather than in those stemming from different status and/or social class. The selection of the sample from neighborhoods defined as disadvantaged predetermined a similarity among the families in regard to S.E.S. and many aspects of standards of living, such as housing, services available, etc.

The research included 177 families. The data was gathered by means of open-ended questionnaires and participant observation between the years 1972 and 1974. Only 127 of the families had school-age children at that time; in the others, the children were of preschool age and these families were not included in the present analysis. The 127 families had 554 children whose ages ranged from 6 to 33 years (an average of 4.3 children per family), most of whom (87.7%) were born in Israel.

During the period when the data was being collected, 75% of the 554 children were attending school (N=415). The information about the children's marks was obtained from school reports. Information was available only on 342 out of the 415 children. Table I.10 in the Appendix describes the distribution of the children by age and educational setting.

II. THE FAMILY SCORE INDEX

"The family score", which is the dependent variable in this study, is the numerical expression of the overall achievements of all the children in a family, each child achieving within its own individual formal educational framework. The guidelines used in constructing this index are as follows:

(1) Achievements are measured within the particular framework in which they were achieved and the marks the child received within it are the expression of those achievements (Appendix, Table II. 1). In determining the achievements, we do not take into account the level of the school itself, the quality of teaching within it, the pattern of evaluation applied, or various other factors that might influence the level of marks a child obtains. What was actually measured was the level of the child's adaptation to a given educational setting and his achievement according to the prevailing standards of the system.

(2) The higher the grade, the more difficult it is for a child to reach a high level of achievement. For this reason, in determining the family score, the weight accorded to the marks obtained in high school is greater than that accorded to the same marks received in the upper grades of elementary school and these, in turn, have greater weight than the marks in the lower grades of elementary school.

(3) This study is focused on the connection between patterns of functioning and family organization and the achievement of all the children in the family without having regard to the individual differences in the children's capacities and/or their place and power within the family unit. Since the family score is a numerical expression of the achievements of all the children in the family, this index does not differentiate between high and low variance in children's achievements within the same family. Thus, a family where there is high variance in the children's formal educational achievements might get a similar family score to that of a family in which all the children have average achievements. (For further details of the index see Appendix, II - The Family Score Index).

According to this index, the family score may range from 25 to 100. In the population studied, the mode is 75.0, the mean 81.9, and the median 82.8. Distribution of the family score is presented in Table II.3 in the Appendix.

III. LIFE-STYLE

Introduction

The aim in examining the variables in this section is to identify the system of norms and values transmitted within the family unit. These variables are of two types:

1. Variables connecting the family unit with a sub-category in society at large from the viewpoint of norms and values (religious-secular).
2. Variables relating to the family unit as a comprehensive whole, as it expresses itself in ritual-symbolic form.

Relevant studies point to two kinds of relations between ritual-symbolic forms of expression within the family (whether dictated from the outside or created from within) and structural family variables:

1. more rituals are conducted in middle-class than in lower-class families;
2. rituals appear more frequently in cohesive than in non-cohesive families.*

Life-style variables are more effective indicators than other variables (economic, educational, etc.) in determining the family's social position. They serve, furthermore, to reflect the differential qualities within the family unit (cohesiveness and/or nature of internal relationships).

(a) Levels of Religious Self-Definition

The families graded themselves on a three-level scale: religious, "traditional",** secular. An F test indicated that, according to this criterion, there are no significant differences in family score. When this self-definition tends toward the secular pole, the correlation between it and the family score shows a slight drop in

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* James H.D. Bossard and Eleanor S. Bell, "Ritual in Family Living" in: Marvin S. Sussman (ed.) Sourcebook in Marriage and the Family. Second Edition, 1963.

** In coloquial Hebrew, those who are at neither extremity of the religious-secular continuum define themselves as traditional.

the latter (-.077). We should nevertheless bear in mind that the self-definition (as secular, traditional or religious) does not take into account the influence of the factor of religion on the patterns of family functioning. The joint attendance of father and sons at synagogue services was used as an index to ritual expression within religious self-definition. Even if such joint activity does not necessarily point to the family's level of religious identification (that is to say, it is not a repetition of the former index), it does point (mainly) to a sphere of joint family activity which is anchored in the social value system.

Significant differences were found between the family scores according to this index, as presented in the following table.

Table No. 1: Family score according to joint attendance of father and sons in synagogue *

Synagogue attendance	Family Score-Mean	N	
All the sons join their father at synagogue	88.2	9	F = 2.517
Some of the sons join their father at synagogue	86.8	23	α = 0.08
The sons do not join their father at synagogue	80.7	39	η = 0.25
Total		71	α = 0.015

* Only for those families whose members, jointly or separately, attend synagogue regularly.

Table No. 1 indicates that the family score is highest when the father and all the sons attended synagogue together. In families where the father went to synagogue without his sons, the family score is lowest and close to the mean score of secular families (80.0). Thus, the family's self-definition as religious or traditional is connected with a significant increase in family score only when a family activity stemming from this definition appears as an intermediate variable. So that, when a regression was done on the family score, it showed that information

as to whether the family is religious, traditional or secular did not contribute to the explained variance while, when the index of joint synagogue attendance by father and sons was introduced, it showed a contribution higher than any other variable of life-style - 6.6%.

(b) Family Rituals

There is no discernable pattern of social value commitment among the population under study, except the pattern of commitment to the various religious levels. This means that the informants did not belong to any ideological, political or other groups which prescribe a specific life-style. Thus, the only rituals, other than those anchored in communal religious duties, which are observed by the families studied are those whose significance lies in an internal familial area and whose importance is in the spheres of family self-expression and cohesion. A number of rituals of this kind were examined. The correlations between observance in the family of each ritual and the family score is presented in the following table.

Table No. 2: Correlations between the family score and the observance of various family rituals.

Type of ritual	t	α	Correlations with family score		
			r	α	N
Family meal on weekdays	-.47	.64	0.47	.319	105
Family meal on Sabbaths	-3.65	.002	.183	.039	101
Family gatherings - afternoon or evening	-2.10	.04	.210	.019	98
Joint family leisure time on Sabbaths	-2.68	.015	.175	.047	92
Children's birthdays celebrated at home	-1.48	.14	.166	.072	79
Rituals performed with extended family on Festivals and Sabbaths	-.69	.49	.071	.247	96

In three of the six rituals tested, the results indicated significant differences in family score between the group which observed a specific family ritual and the group which did not. For another variable, that of children's birthdays, a close to significant result (α = 014) was obtained. In other words, a situation in which the family has dinner and spends time together on Sabbath Eve and/or Sabbath, has family gatherings on weekdays and adheres to the custom of celebrating children's birthdays at home is conducive to higher achievement by the children within the formal educational system. Whether the family did or did not have dinner together on weekdays did not affect the family score in any way.*

The number of ceremonies observed by each family was added up and the correlation between this index and the family score was calculated. The correlation is .23, at an 0.004 level of significance. Namely, the more family rituals, the higher the achievements of the children in the family.

We assumed that the presence of family ceremonies may indicate differential qualities of the families and that these would be reflected in the children's achievements. An inquiry was, therefore, made within each of the three groups - religious, traditional and secular - to determine whether family ceremonies were indeed reflected in higher achievements. Our findings show that the family score is higher in those families where rituals are practised than in those where rituals are absent (Table 2). But, as is shown in the following Table, the importance of family ritual does not lie only in the practice per se of the ritual, but also in the significance of its content.

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* In our opinion, this can be explained by the fact that the times of weekday meals of individual family members are largely dictated by their different obligations in frameworks external to the family (work, school, etc.).

Table No. 3: Differential in family scores between families with family rituals and those without such rituals, according to the type of ritual and the family's religious self-definition.*

Religious Self-Definition:		Secular	Traditional	Religious	Total
Type of ritual	Family score -				
Sabbath meal	with rituals	81.5	83.6	84.8	83.4
	with no rituals	83.0**	75.0	73.0	75.0
	differential	-1.5	8.6	11.8	8.4
Time spent together on Sabbath	with rituals	80.8	84.4	85.6	83.6
	with no rituals	79.0	74.0	73.2	74.8
	differential	1.8	10.4	12.4	8.8
Daily family gatherings	with rituals	83.4	86.0	87.4	85.6
	with no rituals	77.1	80.1	82.0	79.7
	differential	6.3	5.9	5.4	5.9

* This Table was calculated on the basis of Tables III. 1, 2 & 3 in the Index.

** Only one case.

From Table No. 3 we see that for each of the rituals tested the family score is higher when there is a ritual than when there is not (see totals). The significance of the content of the ritual is clearly seen from the differentials in family score according to the family's religious self-definition: in families that define themselves as religious or traditional, the presence of the family ritual (Sabbath meal and/or time spent together on Sabbath) is accompanied by a considerable rise in the family score. On the other hand, the presence of these rituals in families that define themselves as secular is accompanied by only a slight change in the family score. The presence in a family of a ritual which has no religious meaning (e.g., daily family gathering) is accompanied by a similar rise in family score for all three groups, irrespective of religious self-definition.

It would seem to us that the difference in the influence of a particular ritual on the family score depends on the degree to which this ritual expresses the family values. Thus, Sabbath rituals are more meaningful in the context of religious or traditional families; but a ritual which expresses cohesion of the family unit, although it has meaning in the context of all three groups, is the only one which has a considerable influence on family score in the group of families that define themselves as secular.

(c) Religious Self-Definition, Family Rituals and Family Score.

A regression was calculated on the family score for the two groups of variables (religious self-definition and family rituals). The grouped variables explained 14.2% of the variance. The variables which explained this variance to the greater extent are: the joint synagogue attendance of father and sons (6.6%), the joint family meal on Sabbath Eve and/or Sabbath (4.4%) and the family gatherings during the week (1.6%). The information necessary for this regression was available for only 70 families. Because information on these variables was more easily obtained from religious people, they are the dominant group. This is why a separate regression on families who defined themselves as secular was calculated; in this regression, only information about family rituals was included. This regression explained 19% of the variance in the family score; the daily family gathering explained 9%; the weekday joint family meal, 5.7%; joint leisure-time on the Sabbath, 1.9%; Festival and Sabbath rituals performed together with the extended family added another 1.1% to the explained variance.

Conclusions: Life-Style

As already noted, the variables relating to family life-style explained 14.2% of the variance in family scores. Among the religious families, the dominant variable was joint attendance of father and sons(s) in synagogue services. Among the secular families, the variable of their weekday gatherings had the greatest influence on family scores.

The data indicate an association between the presence of family rituals and/or family participation in extra-familial rituals (such as joint synagogue attendance) and the children's achievements in school.

Depending on the variations in the life-style of the families (whether according to level of religious identity or other criteria), different levels of importance are attributed to the different kinds of rituals.

From the present data and from previous research, it can be inferred that the existence of a ritualistic expression to which the family, in its life-style and/or its ideology, adheres is a means both of expressing and of strengthening the family's cohesion and, at the same time, of elevating its level of organizational efficiency as a unit.

IV. ORGANIZATION AND ALLOCATION OF TIME

Introduction

In this study, time is treated as a family resource. As such, it was studied from the point of view of its organization and from the point of view of its allocation.

(a) Organization of time.

This is measured by the amount of preplanning and the regularity and routinization of the pattern for allocation of time to the various activities. The utilization of routines in functioning makes both for more efficiency in the patterns of functioning and a general atmosphere of order, as well as for greater predictability as to the functioning of the household and of each individual member within it. On the other hand, exaggerated rigidity of routines of this kind tends to limit the scope of possibilities of manoeuvering and the ability of the individual to cope with unpredictable situations which might present themselves.

Certain components of time organization are determined by external factors, such as extra-familial frameworks of activity (for example, school and/or work schedules of the various family members). Hence, only part of the organization of time is under the individual's independent control.

(b) Allocation of time.

This variable enables us to evaluate, according to the amount of time the various family categories devote to their different activities, the relative importance they attach to these. The pattern of allocation of time thus reflects the needs and values of the family unit. Nevertheless, it cannot be maintained that the more time a family devotes to a certain sphere of activity, the higher its place in the family scale of priorities, since the amount of time given to a particular activity is, at least partly, determined by the nature of the activity itself. However, on a comparative basis, the time devoted can indicate the variations in the level of importance attributed to different activities by various families.

This report presents data which concern the allocation of time by various family categories to different spheres of functioning. Under the heading "Organization of Time", the data refer only to the mother-housewife's pattern of organization. Generally, she would have more control over her time than any of the other family members. However, even her day is, to quite a considerable extent, susceptible to manipulation and direction by external frameworks in which other members of the family are involved, since many of her activities are oriented towards the needs of other family members.

Consequently, the effectiveness with which the mother-housewife organizes and allocates her time has a direct bearing upon the pattern and efficiency of the family's functioning as a whole, and that of each individual member.

General Findings

An analysis of the time schedules of various family members showed that it is the mother who spends the most hours at home - an average of 21.8 hours per day. She devotes, on average, 5.1 hours to housework, 1.8 hours to watching television and 3.7 hours to attending to the children (physical care as well as time spent in interaction with them). The father, on the other hand, spends only some 14.2 hours at home each day; very little of his time is devoted to housework and shopping (0.16 and 0.14 respectively); he spends more time watching television than does his wife (an average of 2.1 hours a day), and he also spends more time on personal entertainment and on his own affairs (0.42 and 1.0 respectively). To the children he devotes an average 1.2 hours per day.

The relative time allocated to each of these activities changes as the family grows, the most prominent shift being in the time devoted to housework, shopping and activities with the children (Appendix, Table IV.1). The more children there are in the family, the more time the mother spends on housework and shopping, and the less time she devotes to the children themselves. This decline in the mother's attention is not, however, compensated by increased participation by the father. On the contrary, the husband's involvement dwindles as the number of children increases and he devotes less time to them, as well as to housework in general.

(a) Allocation of time and the family score

In this section, we examine the relationship between the family score and two independent variables:

1. The time devoted by various family members (mother, father, children) to different types of activities.
2. The extent to which the mother's daily and weekly schedules were organized.

The following Table presents those variables which were found to have a relatively high correlation with the family score when the number of family members in the household is held constant.

Table No. 4: Correlations between time variables and the family score

Variables		Correlation	Significance
Mother:	Time spent watching TV	.25	.04
	Time spent with children	.15	.14
	*Administrative functions outside the house	-.33	.007
	Time for entertainment	-.16	.12
Father:	Time spent on housework	.15	.14
	Time spent with children	.32	.009
Children:	Time spent playing	-.21	.06
	Time spent watching TV	.21	.06
	Unstructured time spent at home	-.22	.05

* Payment of bills, visits to the welfare office, et al.

For the mother, the figures show a significant positive correlation between the time she spends watching television and the family score; while a significant negative correlation was found between the time she devotes to administrative functions outside the house and the family score.

For the father, a significant positive correlation was found between the time he devotes to activities with his children and the family score.

Special attention should be drawn to the difference between the allocation of the mother's time and that of the father, and the connection of these two with the family score: the significant correlation between the mother's pattern of time allocation and the family score is related to her general activities and not to the time she devotes to activities with the children. In contrast, the only variable in the father's pattern of allocation of time which correlates highly and significantly with the family score is the variable measuring the time devoted to activities with children. It is interesting to note that the time the mother spends directly with the children shows a correlation with the family score which is low and not significant. Exactly the same low and non-significant correlation exists between the time the father spends on housework and the family score.

The family score correlated positively (almost significantly) with the average time the children spent watching television, and negatively (also almost significantly) with the time they spent playing. Our general information on the neighborhood studied indicates that in many families the term "children's play" refers simply to "keeping them out of the way" in play activities that are formless as regards both time and content. This may explain, at least partially, the negative correlation. This explanation is reinforced by the significant negative correlation found between family score and children's "unstructured time", namely, time spent roaming around the house, not occupied with any activity in particular. According to the data of this study, the more unstructured

and the more lacking in content the children's time, the lower is the family score.* (See also Table No. 7).

The proportional amount of unstrucutred time the children spent at home is an important indicator of the extent to which their time is patterned, planned and organized, and of the general importance the family attaches to the utilization of time.

As will be shown in the following three tables**, the pattern of allocation of time of each family category affects the accounted for variance differently.

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* It should be kept in mind that in the population studied the norm is that a large proportion of the children's free time is unstructured. It would be interesting to compare the association between family score and the level of structured time for children in a population where the norm is to leave the children the least possible amount of unstructured time.

** In these regressions, only those variables are presented which contribute 1% or more to the accounted for variance.

Table No. 5: Percentage of variance accounted for and correlations of mother's time variables and the family score

Variables	Variance accounted for in regression function on the basis of correlations	Correlation with the family score
No. of family members in household	3.5%	-.19
Time for administrative functions outside the house	10.5%	-.33
Time for watching television	1.8%	.24
Time for entertainment	1.6%	-.15
Time for sleeping	1.2%	--
Time for shopping	1.3%	--
Time for housework	1.2%	.09
Time for activities with the children	each one under 1%	.14
Time for personal activities		-.08
Total accounted for variance by the whole regression*	31.6%	--

*This total includes also weekly schedule, employment of mother and daily schedule.

Table No. 6: Percentage of variance accounted for, and correlations of the father's time variables and the family score

Variables	Variance accounted for in regression function on the basis of correlations	Correlation with family score
No. of family members in household	3.5%	-.19
Activities with children	9.7%	.36
Housework	2.1%	.15
Time spent sleeping	1.0%	-.14
Administrative functions outside the house	0.8%	-.11
Entertainment	0.1%	-.04
Total variance accounted for	18.6%	--

A particularly large contribution to the family score appears to be made by the amount of time the father devotes to activities with his children.

Table No. 7: Percentage of variance accounted for and correlations of children's* time variables and the family score**

Variables	Variances accounted for in regression function on the basis of correlations	Correlation with family score
Unstructured time at home	4.7%	-.19
Time spent watching television	5.3%	.12
Time spent playing	1.9%	-.22
Time spent eating	3.8%	.14
Time spent resting	3.0%	.14
Time spent on outings	1.3%	.22
Total accounted for variance calculated on the basis of all the variables in the regression	25.4%	--

The findings in the separate regressions presented in Tables 5, 6 and 7 strengthen those presented previously in Table No. 4: in the mother's pattern of allocating time, those variables relating to her general and/or personal activities contribute the most to the accounted for variance in the family score while the time devoted to her activities with children contributes less than 1% of the accounted for variance.

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* Children still attending school.

** The regression function was calculated on the basis of correlations between the mean value of time devoted by the children to the activities and the family score.

In the pattern of allocation of children's time, the variable measuring time spent watching television was found to contribute the most to the accounted for variance in the family score, although the variables "unstructured time at home", "time spent eating" and "time spent resting" came quite close to it.

To obtain a more general picture, a comparison was drawn between the relative contributions of the various family categories, as follows:

Patterns of time allocation	Contribution to accounted for variance
Mother's	31.6%
Children's	25.4%
Father's	18.6%

It is evident from this comparison that the mother's pattern of allocating her time accounts for a portion of the variance which exceeds that of the other family members. Within her time pattern, the variables "time for administrative functions outside the house", "time for watching television" and "time for entertainment" contributed the most.* The father's pattern of time allocation contributes least to the accounted for variance, with the time spent with children being the dominant variable in it. The relative contribution of the pattern of the children's time allocation falls between those of the father and the mother, the most important variable being the amount of "unstructured time" and of "time spent watching television".

In addition, in order to examine the relation between the patterns of time allocation of the different family categories and the family score, a multiple regression analysis was calculated for family score on the time organization

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* In a regression function calculated on time variables of all three family categories, the mother's weekly schedule is included among the eight variables that contribute the most to the accounted for variance (see Table No. 8, following).

variables of all the family members. Only those variables were included which correlated significantly with the family score when calculated separately for each family category. In this regression function, the amount of variance accounted for reaches 55% (for 20 variables), and the adjusted variance (adjusted 12 square) reaches 28%. It should be noted that the first eight variables alone accounted for 46.2% of the variance (adjusted variance 37%). These variables and their proportional contributions are detailed in the following Table.

Table No. 8: Variance accounted for by time variables and correlations of these variables with the family score

Variables	Percentage of accounted for variance	Correlation with family score
Time devoted by father to activities with his children	13.2	.36
Time spent by mother watching television	6.9	.22
Children's unstructured time at home	7.9	-.19
Time spent by children on outings	4.2	.22
Time spent by mother on administrative functions outside the house	4.0	-.33
Time spent by father on housework	3.6	.15
Time spent by mother on housework	3.5	.02
Mother's weekly schedule	2.9	.26
Total	46.2%	--

The most prominent finding in the above table is the high contribution which the variable measuring the time devoted by the father to activities with his children makes to the accounted for variance in family score. This finding is

interesting in the light, on the one hand, of the small influence the father's pattern of allocation of time generally has on the accounted for variance of the family score and, on the other hand, of the very limited time the father spends with his children as compared with some of the other time variables included in this regression function. That is to say that a pattern of time allocation which is marginal from the viewpoint of the amount of time devoted to it both by the father and by the children, and marginal, also, in the general time schedule of the family, exerts a far greater influence than any other variable upon the accounted for variance in the family score.

(b) Organization of time and the family score

Information about the level of organization of time was collected only from the women in the sample, all mothers and housewives. About 70% of the women in the population studied are not employed outside the home. Most of those who are thus employed (i.e. the remaining 30% approximately) are employed in part-time jobs and/or in jobs where the working hours are not fixed and are, like housework, subject to the woman's control and planning. As has been mentioned before, the level of time organization of the students and/or working men in the family is largely dictated by their extra-familial activities.

On examining the level of organization of time, three levels were distinguished: 1) fixed daily schedule, when the location of activities in the time continuum was fixed and had a rigid daily pattern; 2) flexible daily schedule, when there was a general pattern which could be changed according to needs or circumstances; 3) no daily schedule, when there was no prior planning of daily activities and these were performed on an ad hoc basis, depending on circumstances or on the mother's whim. These three levels also applied to the weekly schedule.

The distribution of the organization of the women's daily and weekly schedules is given in the following Table.

Table No. 9: Women's level of daily and weekly time organization

Unit of time:	Day		Week	
Level of organization	%	N	%	N
rigid	71.9	105	60.3	82
flexible	9.6	14	10.3	14
none	18.5	27	29.4	40
Total	100.0%	146	100.0%	136

The following data confirm the assumption that there is a correlation between the level of organization of time and the family score.

Table No. 10: Correlation between the mother's level of organization of time and the family score

Organization of time	Correlation	Significance
daily schedule	.13	0.11
weekly schedule	.26	0.006

Although both measurements, the daily schedule and the weekly schedule, show a tendency to positive correlation with family score, only the weekly schedule was used in the general regression function, as can be seen in Table No. 8.

Conclusions: Organization and Allocation of Time

According to our findings, the two main factors in determining the time allocation and organization of a family are the constraints arising from activities of family members outside the home and the pattern of time allocation and organization of the mother. The data indicate that the mother's pattern of allocating her time and her way of organizing it account for the major part in the variance in the family scores.

The mother's investment of a great deal of her time in activities external to the home is associated with a drop in the family score, and the more her time is organized according to set routines, the higher is the family score.

The pattern of time allocation of the children is next in importance in explaining the accounted for variance in family scores. For the children, "unstructured time" was found to be in negative correlation with the family score, while "watching television" showed a positive correlation.

The pattern of time allocation of the father contributes the least to the accounted for variance in family scores; however, one variable in the father's time allocation, namely that of "time devoted to interaction with his children", contributed to the accounted for variance in family scores more than any other single variable.

The strong correlation between watching television, mainly by the mother and/or the children, and the family score requires some further discussion:

In the families studied, watching television is not just a passive activity. During the research period, television transmissions took place only in the late afternoon and early evening hours. In these families, those mothers who managed to organize their time so that all housework was concentrated in the morning hours were then able to spend more of the afternoon and early evening hours with their children, chiefly in television viewing (a pastime common to the whole group studied), and the television programs they watched constituted a subject for conversation and a focus for family interaction. Children who spend a lot of time watching television have more opportunity than others for interaction with the mother and/or with both parents, who join the "television session" when they are free to do so. In other words, the time spent watching these programs is a combination of our two main variables - allocation of time and organization of time. It is our opinion that watching television is thus an indirect index of

cooperation within the family and of the level of family interaction. These opportunities for interaction are doubly important in view of the limited number of opportunities that exist for other kinds of "all-family" interaction. The connection between the time the mother and the children, together or separately, spend watching television and the family score appears to be a connection between the level of interaction within the family and the children's achievements. Also the positive connection between the amount of time the father devotes to joint activities with his children and their achievements is a connection of the same kind, and strengthens the former finding. The negative reflection of these findings is expressed in the time the children spend in undefined and unorganized activity.

V. ORGANIZATION OF SPACE

Apartment space is a resource available for family use and manipulation in various ways. It is well known that in the disadvantaged population in Israel there is a lack of living space. Numerous occupants in an apartment, all requiring fulfillment of their space needs within it is a common situation. Thus, the allocation of space in the apartment is always a result of compromise which arises out of choices among the needs, pressures and values which direct it, and decisions on priorities among the various claims on space. It constitutes, at the same time, an objective framework within which the way of life of the occupants and the patterns of interaction among them are, to a great extent, directed and moulded.

Of all the organizational, functional and value indices that may be extracted from the space allocation patterns in the apartment, we chose two which represent the options of privacy for the family members. *

(a) Individual Index - In the research population, the possibility of allocating a bed for each person does not depend on the resources available for its purchase, but on the place available for an additional bed in the limited space of the apartment. The allocation of space for a bed for each occupant (or for a double bed shared by parents, or a convertible couch shared by two children) usually means renouncing other familial aims requiring space.

(b) Group Index - The general tendency in the population studied is to recognize that sub-groups within the family need privacy. These sub-groups are defined according to age and, for adolescents, also according to sex. The result is a

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* The main reason for choosing these variables in particular is the great importance psychological literature attaches to "privacy" as a necessary condition both for the development of the children and for the mental stability of the adults.

basic sub-division between adults (parents) and children. Within the category of "children", the sub-divisions are "small children" (up to about 12 years old) and "older children" (adolescents - 13 years and older). There is a strong tendency to sub-divide this latter group into boys and girls. Each of these sub-groups is considered as "entitled to private space" and/or, when it uses the private space of another sub-group, as "disturbing". The extent to which the family unit succeeds in allocating private space to each of its sub-groups depends on objective conditions (size of apartment, number of occupants, family composition by sex and age), and on its willingness to give up other aims requiring space (for instance, to give up a living room and/or to use space in different ways at different times, as when the living room is turned into a bedroom after the general familial activities are over).

In this pilot study, we have examined the connection between the two indices of privacy and the family score.

Findings

General Data

Most families (93.8%) have a room which they call "the children's room". However, only 61% of the families have sleeping arrangements which separate the parents from all the children. In 36.7% of the families, children sleep in the same room as their parents. The sharing of a bed (children with adults and/or other children) was found to be a common phenomenon. In only 53% of the families did each child have a bed to himself; in 30.5% of the families, some of the children shared beds; and in 12.4% (22 families), no child had a bed to himself (Appendix, Table V.1).

An examination of the criteria for space allocation within the group of children was carried out. Here, the criterion of sex (separation of boys and girls) takes precedence over that of age (separation of adolescents from young children). Only 8.5% of the families allocated a separate room for their

adolescents, while many more families (26.9%) allocated a separate room for the boys (of all ages), and 28.9% allocated a separate room for the girls (of all ages).*

Space organization providing privacy for individuals was quite uncommon. In 9% of the families (N=16), one child slept alone in a room, this usually being the living room.

Patterns of allocation of space and the family score

In order to examine the relevance of patterns of allocation of space to the achievements of children in school, we calculated correlations between the various privacy situations of different family categories and their relationship to the family score. The following table presents our findings.

Table No. 11: Correlation between different privacy situations for children and the family score

Variable	Correlation
Privacy for children as a group	0.05
Privacy for young children as a group	0.001
Privacy for boys as a group	0.07
Privacy for girls as a group	0.12 (α = .103)
Separate bedrooms for adults and children	0.11
Separate bed for each child	0.12 (α = 0.12)

The data show that for two of the six variables the difference between the groups is close to significant. This analysis indicates the importance attached by the family to the separate grouping of girls as well as to separate sleeping

* The percentages are calculated on the basis of families which include the relevant categories.

arrangements for parents and children. When families succeeded in achieving the desired arrangement, the mean family scores were higher than those for families which did not succeed in this.

The highest correlations between privacy situations and the family score were found: a) where there was allocation of a space for girls as a group; b) where each child had a bed to himself; and c) where there was a separate sleeping arrangement for parents and children. (Further affirmation of these findings can be seen in the regression function presented in Table V.2 of the Appendix).

Conclusions: Allocation of Space

In our sample families, privacy for anybody is rare. We examined the family scores in cases where some privacy for children was achieved as compared with cases where this was totally lacking. Besides the differentiation between the existence or the lack of privacy, we also calculated the kind of privacy made possible by the organization of space for different family categories. The connections found between these independent variables and the dependent variable are weak. For three variables, a close to significant connection was found: when girls had the opportunity for privacy, when sleeping arrangements separated adults from children and when each child had his own bed, there was a rise in the family score.

These weak connections may be due to the fact that the examination referred to space allocation for family categories and not for individuals. It is possible that the connection in this context exists only on the individual level; that is to say that the level of a child's achievements is more closely linked to the level of his privacy than is the level of privacy for the children (as groups) to the family score. Such an examination has not been undertaken and it seems worth while to do so in the future.

VI. ORGANIZATION AND USE OF MANPOWER

Introduction

The study focuses on two aspects of organization and use of manpower - (a) The family division of labor is a system whereby the needs of the family members are fulfilled. The more each member contributes to the family's reserve of manpower resources, the greater will be the total sum of these resources, thus increasing the number of functions which the unit is able to perform. If one member, or a few only, are burdened with all the work, the number of functions and the level of their implementation will inevitably drop. (b) The pattern of division of labor within the family is the model of the role-image which the children in the family unit learn. These images are, for the most part, a combination of sex models and age models. The pattern of family division of labor has a number of implications:

1. The more rigid the division of labor, the more rigid the images learned and the less role openness and flexibility there is.
2. The more the division of labor is patterned to suit the interests of the adults rather than those of the children, the more negative will be the child's role-image and the greater his incentive to conclude the period of childhood as rapidly as possible.

There are a number of theoretical approaches to the question of rigidity in division of labor versus flexibility and openness in utilization of manpower resources. However, since there is no previous indication from available data of any particular trends or connections, the examination here of a few possible assumptions and their correlations with the dependent variable is pertinent:

a. From the organizational viewpoint, we may assume that growth in number and age of the family members increases the number of available persons in the labor pool, thus improving the level of services the home provides and its response to the needs of the individuals within it.

b. A different theoretical approach (Blood & Wolfe)* suggests that the most efficient division of labor is one which is based on specialization according to skills; that is to say that a home where each individual has his exclusive sphere of specialization provides the highest level of performance and the best service.

c. When there is cooperation in fulfilling household duties, namely, where activities are carried out cooperatively by more than one person and/or where the individuals performing them may be interchanged, such cooperation would be an indication of family values. A pattern by which all family members participate in the household duties indicates an image of the family and the household as a partnership in which all share responsibility.

In conclusion, different patterns of manpower utilization contribute to the various needs of the family unit and the socialization process of the children.

We may assume that an extreme form of any one pattern (for example, either extreme specialization in performing duties, or full participation of all family members in all tasks performed) will be detrimental to one of the other aspects of the process of organizing and utilizing the manpower resources.

The data indicate different patterns produced by the various combinations of participants in household tasks with regard to role-image as well as to the possible response to family needs (for example, families in which the husband participates in household duties present different role-images and a different level of response to family needs from families in which all household tasks are performed by the mother and the children only). Consequently, we did not content ourselves with measuring the relation between the number of tasks undertaken jointly and the family score, but examined also the association between the family score and each of the patterns of cooperation (father-mother; mother-children; father-children; father-mother-children).

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* Blood, R. O. and Donal M. Wolfe, 1960; Husbands and Wives, Glencoe, The Free Press.

General Data

The allocation of adult tasks within the family was found, in this research, to be determined mainly according to the criterion of sex: household tasks concerned with its internal functioning, with the physical care of children and with responsibility for their adequate performance in the educational framework are "feminine" tasks, and the overwhelming majority of the women in the population studied performed them, either independently or with the help of others; marketing, arrangement of the financial matters of the household and earning a livelihood for the family are "masculine" tasks, and most of the men in the sample performed them, although women very often also participated in them.

Despite the clear dominance of women's performance of "feminine" tasks and men's of "masculine" tasks, the overall picture is not one of extreme polarization. The participation of women in men's tasks is very common - 30-50 percent of the women in the sample shared in various masculine tasks. Of all the "feminine" tasks, there are only two (laundry and cleaning) in which the men never participated. With the exception of these two, men performed or helped in performing quite a number of "feminine" tasks, especially those having to do with the upbringing and education of the children. The task of help with homework is a special case. It is more often performed by men than by women, but on the whole it is divided more equally among the three family categories, mother, father and children (older brothers and sisters), than any other household task (Appendix, Tables VI. 1 & 2).

Children's participation in household tasks increases with their age. Their tasks usually consist of "baby-sitting" for younger siblings and, as already mentioned, helping with homework. They also participate, although less often, in "feminine" tasks, but never in either "masculine" or exclusively parental tasks, for instance, in parent-teacher contacts (Appendix, Table VI. 1).

The data indicate a strong tendency toward role specialization: about 2/3 of all the tasks performed in the sample households are performed by one specialized person, and only 1/3 are performed by more than one member in the household (Appendix, Table VI. 1). For example, even though most household tasks are "feminine", in some of the sample families it is the man who does the shopping in the local grocery store. In these cases, this is his exclusive specialization and the woman does not perform this task.

The pattern of maximal interchangeability (i.e., where mother, father and children perform the same task, either together or interchangeably) appears relatively more often in tasks such as "baby-sitting" for younger children (12.2%), helping with homework (9.7%) and miscellaneous housework (8.3%).

1. Pattern of division of labor as an index of the level of response to the needs of household members.

Our assumption is that the more the household members contribute to the performance of household tasks, the higher (at least potentially) is the household's level of response to the needs of its members. We therefore examined the correlations between the average number of family members and the number of family categories participating in each of the household tasks (Appendix, Table VI. 3).

It was found that the directions of correlation are not consistent for all household activities. For 6 of the 11 tasks, the participation of its members in these tasks increased as the size of the family increased. This trend is statistically significant for 5 tasks: weekly cleaning, daily cleaning, looking after small children, physical care of children, and miscellaneous housework. For another 5 tasks, negative correlation was found - the growing number in the family was accompanied by a shrinking in its members' participation. The correlation is statistically significant for one task - that of accompanying children to and from school or kindergarten. Usually, the number of participants increases with the size of the family for tasks carried out inside the home, while a negative

correlation appears for the tasks performed outside the home. To this, helping with homework is an exception; although it is done inside the home, the number of participants drops as the size of the family increases.

a. Association between the level of household members' participation and the family score

Following upon the above examination, we calculated the correlations between the number of participants in the various household tasks and the family score (Appendix, Table VI.4). These correlations showed, in general, a positive trend, except for three tasks: weekly cleaning, daily cleaning and looking after small children. The correlations between household tasks and family score are significant only for two tasks: participation in miscelaneous household tasks and physical care of children. A comparison of the correlations in Tables VI.3 and VI.4 of the Appendix shows an improvement in family score only in those cases where the number of participants in household tasks increases with the number of family members. It appears that the number and the category of participants have different implications for different tasks.

b. Association between the number of tasks performed by each family category and the family score

The data show that there are considerable differences in the relative contributions of family categories to household functioning and these are expressed in the number of tasks in which each category participates. First, we checked the family score according to the number of tasks each category performed. The findings of this examination are detailed in Table VI.5 & 6 of the Appendix. We then examined the correlations between the number of tasks each category performed and the family score. These correlations are presented in the following Table.

Table No. J2: Correlation between the number of tasks each family category performs and the family score

Family category	Correlation with family score	α	α when no. of residents held constant	Correlation when no. of residents held constant
Wife	.16	0.03	0.09	.12
Husband	.11	0.11	0.26	.06
Children	.11	0.11	0.006	.23

The data show that there is a positive correlation between the number of the tasks performed in the household and the family score. Participation in a greater number of tasks raises the family score, although the correlations are statistically significant only for the wife. It appears that a greater participation by the children results in higher marks at school. This holds for up to 6 or 7 tasks; above this number, there is a drop in the children's achievements and therefore in the family score (see Table VI. 5 in the Appendix). It is important to note that when the number of household members is constant, the correlation between the family score and children's participation increases.

A stepwise regression function of the number of tasks implemented by each member of the family score was calculated, the number of household members being the first variable. The number of household members accounted for 3.5% of the variance, and the number of tasks performed by the children accounted for 4%. The number of tasks implemented by the husband and wife does not contribute to the variance accounted for.

2. Division of labor within the family as a model for role-image

As has been said, in spite of the general tendency towards division of labor according to sex, the population studied does not present a picture of extreme polarization in the familial division of labor. In most families, we find women doing "masculine" tasks, and vice versa. The impact on the family score of rigidity-flexibility in division of labor is more evident in areas where the criterion for the division of labor is specialization than where the criterion is sex. As the pattern of specialization does not parallel the general trend of division of labor according to sex, it was necessary to measure the pattern of specialization for each task separately. Role specialization versus cooperation and/or interchangeability in the performance of household tasks as they relate to the family score are presented in Table No. 13 (following page).

Table No. 13: Distribution of family scores by pattern of division of labor

Pattern / Activities		Wife Alone		Husband	Children	Wife & husband	Wife & children	Wife, husband & children	Total
		No husband in the home	Husband does not help						
Weekly Cleaning	$\bar{X}$	79.6	83.0	69.0	77.0	79.8	83.6	--	103
	N	3	62	1	4	6	21	--	
Daily Cleaning	$\bar{X}$	79.6	82.7	69.0	69.0	73.4	84.6	84.0	104
	N	3	58	1	1	5	32	3	
Other daily tasks	$\bar{X}$	78.0	81.3	--	--	81.8	81.9	91.6	78
	N	3	43	--	--	15	33	11	
Washing & Ironing	$\bar{X}$	79.0	82.8	--	69.0	83.1	84.0	100.0	102
	N	5	74	--	1	11	9	1	
Local grocery shopping	$\bar{X}$	79.6	82.7	74.0	82.5	89.0	82.4	93.0	107
	N	3	42	10	8	8	29	2	
Market shopping	$\bar{X}$	80.5	87.2	82.7	82.5	83.6	74.0	--	105
	N	4	20	48	2	22	1	--	
Physical care of children	$\bar{X}$	81.7	81.2	--	69.0	82.6	82.5	91.1	111
	N	4	42	--	1	30	25	7	
Taking children to & from kinder-garten	$\bar{X}$	85.0	84.1	88.5	67.0	63.0	91.3	--	74
	N	2	21	4	1	1	3	--	
Taking children to & from health services	$\bar{X}$	79.6	82.2	85.0	--	86.4	72.0	88.0	101
	N	6	70	3	--	16	4	1	
Looking after small children	$\bar{X}$	78.0	79.0	82.3	87.4	84.7	82.0	81.9	107
	N	2	25	3	11	14	25	15	

For 7 out of the 10 tasks examined, the Table indicates a rising trend in the family score when the task is not carried out by the specialized family member, but interchangeably or cooperatively by different family members. The highest family score is achieved when the pattern is one where there is role-cooperation or interchangeability in performance of tasks among all three family categories, husband-wife-children.

While the openness of a household task to the various task performers serves the need for cohesion in the family and flexibility of role-image, the specialized family member contributes to the efficiency of performance. The size of the household and the number of task performers in it determine whether efficiency rather than cohesion will be chosen, or vice versa.

In the light of these findings, it is not surprising that the correlation between the family score and the level of role flexibility is not statistically significant. Nevertheless, it is worthwhile to present the findings in Table 14 below, where a tendency is seen for the family score to rise with the increase in the number of family members implementing the household tasks, jointly or interchangeably.

Table No. 14: Pattern of participants in household tasks and the family score

Task performers	Family score	N.
Only the wife	75.0	2
Only the husband	95.0	2
Only the children	- -	0
Wife-husband	78.7	32
Wife-children	82.0	6
Husband-children	- -	0
Husband-wife-children	83.3	82
Total		127

This Table reflects the combination of participants in 14 tasks (listed in Table VI.1 of the Appendix). It can be seen that in most families all household members participate in some of the tasks. But the pattern has no reference to the extent of participation, either in number or in type of task. There is an insignificant number of families in which only the wife or only the husband does all the housework. If these are not taken into account, it will be seen that there is a certain preference in the families for a pattern where all the members participate; however, the differences are neither large nor statistically significant. The correlation between the number of tasks performed in cooperation or interchangeably and the family score was calculated with the number of household members held constant; the correlation was .17, with a level of significance of 0.03.

Conclusions: Organization of Manpower

The common pattern of division of labor in the research population is one which is generally directed by the criterion of sex, but without extreme polarization. The examination of interpenetration of roles defined according to sex shows that there is greater penetration by women into "masculine" roles than vice versa.

There is a general tendency in the familial pattern of division of labor toward role specialization. This tendency becomes more pronounced as the number of household members increases.

It has been pointed out that, with the increase in the number of household members, there is an increase also in the number of participants in the performance of internal house tasks, whereas there is a decrease in the number of members sharing in tasks performed in external frameworks (shopping, accompanying to and from kindergarten and/or health services). A decrease occurs also in the number of members who help with children's homework, which is an internal house task. The increase in the number of participants in inside tasks is due

mainly to the inclusion of the children in the manpower pool. This is particularly conspicuous when juxtaposed with the decrease in the number of tasks undertaken by the husband and the wife; that is to say, it seems that the increase in the number of household members, thus obviously adding to the burden of the household functioning, indicates two tendencies:

1) towards inclusion of more participants in the implementation of household tasks;
2) towards a process of role-specialization which, as has been pointed out, contributes to efficiency of performance.

It seems to us that this should provide some explanation for the decrease in the number of tasks undertaken by the husband and the wife in large households and for the process of specialization which appears in certain role-spheres.

An examination of the assumptions concerning the existence of a relationship between the number of participants in each task and the family score showed that for two types of task (miscellaneous household duties and physical care of children) there is a significant connection, namely, that as the number of task performers increases, the family score improves.

As has been said, the increase in number of participants was due mainly to the mobilization of the children for household tasks. At the same time, it is important to note that the positive association between the tasks the children perform and the family score is affected by the number of household duties carried out by the children. When their burden of housework exceeds a certain limit (according to our findings, between 6 and 7 tasks), there is a decrease in the family score. These two types of link between the number of tasks children perform and the family score deserve closer attention. The inclusion of children in household tasks improves the level of household functioning by the very fact of the addition of manpower to the pool, while at the same time contributing to the self-image of the children as active and responsible partners in the functioning unit. However, when the weight of the burden on them exceeds a certain limit,

it appears to have a direct bearing on their ability to invest time and effort in scholastic achievements. The fact that a child is overburdened with household tasks may, in itself, transmit to the child a silent message that little importance is attached to his role in the educational framework. This message is grasped by the child and is reflected in the way he functions. Another possible explanation suggests that such overburdening distorts the "child" image in the family. The role of "child" becomes undesirable and everything included in it is seen in a negative light.

In the same context, it was seen that a flexible role-image (i.e., where family tasks are open to joint and/or interchangeable implementation among family members) has a positive association with the family score. This was found to be valid when calculated both for the over-all family tasks, as well as for most of the family tasks examined individually.

CONCLUDING REMARKS

The study reported in the foregoing was conducted in order to test the connection between the family's patterns of organization and functioning and the achievements of its children in formal educational settings. This study was not intended to reaffirm the general connection between family background or S. E. S. and children's achievements in school, a connection which is already well known. Our aim was to identify expressions of S. E. S. or "background" variables in the everyday life of the family and to measure the influence of such expressions upon the achievements of the children in school.

From the viewpoints of structure, scope and methods, this study is a pilot study, and this being so, no attempt was made to include in it all the areas of family life which might be relevant, and certainly not all the aspects of family organization. The family roles, family rituals and/or family patterns of organization chosen for testing constitute no more than a sample. We cannot, at this time, evaluate the extent to which this sample is representative.

Thus, although this study may, despite its limited scope, point to some general trends in the connections between family organization and functioning and children's achievements in school, the findings do not have an applicative significance. These general trends may be summarized as follows:

(1) There is a connection between the family patterns of organization and functioning and the achievement of its children in school. This is to say that the known connection between family background and children's achievements can be broken down and analyzed on the level of individual families.

(2) The connection that was found between the above dependent and independent variables is a connection between the general functioning and organization of the family and the achievement of its children in school. In other words, the direct imput of the family and its members in activities oriented towards the children's schooling (helping with and/or supervising homework, contact with

teachers and so on) proved to have little influence upon the children's achievements in school. On the other hand, areas of functioning and/or organization that seem to be almost irrelevant to schooling proved to have substantial influence on the children's school achievements.

(3) In those areas tested in the studied population, we found that the more organized and the more efficient the family unit, the higher the children's achievements in school.

It is important to draw attention to the fact that the population studied is defined by the welfare authorities as disadvantaged. Although the criteria for thus defining this population may be open to question, it would, in our opinion, be correct to state that, in general, both the resources available in these families and the knowledge of efficiency techniques in using these resources appear to be below the average standard in Israeli society. The ability to reach a comparatively high level of organization and efficiency under these objective circumstances requires sophisticated skills in articulating as between resources and functioning. In the studied population, even the more organized and the more efficient families did not, perhaps due to the objective difficulties, reach a very high level of organization. It is possible that in social groups where resources are more available and techniques of efficiency in using them are better known, with the result that articulating between resources and functioning is easier, the picture might be a different one. There may well be a "breaking point" beyond which rigidity of organization within family life will have a negative influence on children's achievements.

(4) In families that express their value system in their daily lives, the children were found to be more successful in school than in families that did not. As was presented in the body of this study, under conditions of limited resources the expression of values in daily life requires added effort and determination on the part of the family. It cannot be concluded from this study which factor has the greater influence upon the achievement of children in school: the actual expression of values (such as family ceremonies, or separate sleeping space for boys and

for girls), or the technique of creating a well-defined order of priorities. (5) Conceptually, horizontal organization (that is, articulation between resources and functioning) and vertical organization (that is, articulation between a value system and the forms of its expression in daily life) appear to be complementary. Because of the limited size of the study, we could not test the relationship between these two types of organization, although this would seem to us to be a worthwhile undertaking.

We see this study as a first step. In order to gain a wider and more conclusive understanding of the connection between the family's organization and functioning and its children's achievements in school, we believe that a comparative study of different socio-economic groups is essential. Only a study of this kind would allow us to determine in any conclusive way whether the types and directions of connection between the dependent and the independent variables found in this study are of a general nature or whether they are limited to populations similar to that studied here.

APPENDIX

I. POPULATION STUDIED

Table I. 1: Population Study According to Size of Household*

Number of household members	N	%	Cumulative Frequency %
3	1	0.6	0.6
4	34	19.2	19.8
5	38	21.5	41.2
6	28	15.8	57.1
7	22	12.4	69.5
8	19	10.7	80.2
9	21	11.9	92.1
10	7	4.0	96.0
11	6	3.4	99.4
13	1	0.6	100.0
Total	177	100.0%	

*Calculated on the basis of permanent household members only.

Table I. 2. Distribution by Density in Apartments of Population Studied

Average Density	%	
- 1.599	18.1	
1.6 - 1.999	17.5	
2.0 - 2.499	31.6	
2.5 - 2.999	14.7	
3.0 - 3.499	11.3	
3.5 - 3.999	2.3	18.2%
4.0 - 4.999	2.3	
5.0 +	2.3	
Total	100.0%	

Table I.3: Distribution by Age of Parents in Families Studied

Age	Fathers		Mothers	
	N	%	N	%
21 - 25	2	1.2	22	13.0
26 - 30	31	18.7	44	25.9
31 - 35	42	25.2	41	24.2
36 - 40	49	29.9	43	25.3
Partial Total	124	75.0%	150	88.4%
41 - 45	23	13.8	14	8.4
46 - 50	11	6.6	4	2.4
51 - 55	5	3.0	1	0.6
56 - 60	2	1.2	-	-
Overall Total	165	99.9%	169	99.8%

Table I.4: Cross-tabulation of Mother's Age by Number of Children at Home

Number of children permanently at home / Mother's age	N				Total	%				Total
	2-3	4-5	6-7	8+		2-3	4-5	6-7	8+	
21 - 25	18	3	1	-	22	10.6	1.7	0.5	-	12.8
26 - 30	28	12	4	-	24	16.5	7.2	2.3	-	26.0
31 - 35	8	20	12	1	41	4.7	11.8	7.2	0.5	24.2
36 - 40	7	9	20	7	43	4.1	5.2	11.8	4.1	25.2
41 - 45	3	4	3	4	14	1.7	2.3	1.7	2.3	8.0
46 - 50	3	1	-	-	4	1.7	0.5	-	-	2.2
57 +	-	-	1	-	1	-	-	0.5	-	0.5
Total	67	49	41	12	169	39.3	28.7	24.0	6.9	98.9

Table I.5: Literacy Among Men and Women

Literacy	Women (mothers)	Men (fathers)
Can read	64.1	85.5
Can read a little	10.0	5.4
Cannot read	25.9	9.0
Total	100.0%	99.9%

Table I.6: Years of Schooling for Men and Women

Number of years of schooling	Women (Mothers)	Men (Fathers)
0	18.8	8.9
1-6	20.1	12.6
7-8	31.2	36.7
Total up to 8 years	51.3%	49.3%
9-10	20.0	16.5
11-12	8.2	22.2
13 +	1.8	3.1
Total 9 + years	30.0%	41.8%
Total	100.1%	100.1%

Table I.7: Distribution by Occupation of Men and Women

Occupation	Men		Women	
	N	%	N	%
Does not work	13	16	124	70.1
Unskilled work	43	25.0	29	16.4
Blue collar	43	25.0	3	1.7
Blue collar, Technical-Professional	39	22.7	3	1.7
Petty trade	7	4.1	1	0.6
Minor clerical	9	5.2	11	6.2
Specialized secretary	9	5.2	1	0.6
Qualified technician	1	0.6	-	-
Semi-professional	2	1.2	4	2.3
Other	6	3.5	1	0.6
Total	172	100.1	177	100.1

Table I.8: Parents' Countries of Origin

Country of Origin	Women (Mothers)	Men (Fathers)
	%	%
Morocco	25.1	21.8
Israel	22.2	19.5
Iraq	20.5	26.4
Persia	14.6	11.5
Other	17.7	20.7
Total	100.1	99.9

Table I.9: Parents' Year of Immigration to Israel

Year of Immigration	Women (Mothers)		Men (Fathers)	
	N	%	N	%
Not immigrant (Born in Israel)	39	23.2	33	20.2
Before 1947	3	1.8	12	7.3
1948 - 1951	66	42.3	74	45.3
1952 - 1955	16	9.6	17	10.4
1956 - 1960	18	10.8	8	4.9
1961 - 1965	17	10.2	15	9.2
1966 - 1970	2	1.2	2	1.2
1971 - 1974	2	1.2	2	1.2
Total	163	100.3	163	99.7

Table I.10: Distribution of the Children by Age and Educational Setting

Age / Educational Framework	PERCENTAGES					
	6-13	14-18	Total under 18	19-25	Total	
Secular and Orthodox elementary school	53.1	7.6	60.7	5.0	65.7	
Special Education elementary school	1.5	0.7	2.2	0.2	2.4	
Apprenticeship and vocational course on a high school level	-	1.3	1.3	2.0	3.3	
High school - not geared to matriculation*	-	6.9	6.9	5.0	11.9	
High school - geared to matriculation (vocational or academic)	-	8.9	8.9	6.3	15.2	
Post-high school diploma course	-	0.4	0.4	0.9	1.3	
Undergraduate university studies	-	0.2	0.2	-	0.2	
Total	54.6	26.0	80.6	19.4	100.0	N=540

*High school education in Israel is composed of two main streams - the purely academic stream and the mainly vocational stream. In both of these there are schools whose curriculum includes preparation for the matriculation examinations, while others do not.

II. THE FAMILY SCORE INDEX

Description of the technique used for calculating the family score based on the children's achievements in formal educational settings:-

(1) The average of the children's marks in school was reckoned on a four-level scale as follows:

Table II. 1: Scale of Levels of Achievement

Level of Achievement	Average Mark in School
High	8 or more *
Medium	7
Low	6
Failed	5 or less

* The maximum possible mark is 10.

(2) A distribution of the average marks children in the studied population received in school (in the last year of study) according to the above scale is presented in Table II. 2 below:

Table II. 2: Distribution of Average Marks of Children in the Studied Population.

Level	%	N
Failed	5.6	19
Low	17.3	59
Medium	40.1	137
High	37.1	127
Total	100.1	342

(3) The family score includes the achievements of children still at school and those who had completed their studies. It was calculated as follows: the course of studies was divided into three stages and each student could reach only the maximum grade for the stage he was in. Within his stage, the student was graded on one of the four levels so as to reflect his actual achievements. As the achievements in every stage are based on the achievements of the previous stage, the score at every stage starts with a credit from the previous stage.

Stage according to years of study:

A. First to fourth grades - maximal score 4

Actual grade:		
	Failed (average mark 4 - 5)	- score 1
	Low (average mark 6)	- " 2
	Medium (average mark 7)	- " 3
	High (average mark 8 - 9)	- " 4

Possible range of scores for a child at this level: $\frac{1}{4}$ to $\frac{4}{4}$ = 0.25 to 1.0

B. Fifth to eighth grades - maximal score 8

Actual grade:		
	Failed (average mark 4 - 5)	- score 5
	Low	- " 6
	Medium	- " 7
	High	- " 8

Possible range of scores for a child at this level: $\frac{5}{8}$ to $\frac{8}{8}$ = 0.62 to 1.0

C. Ninth grade and above - maximal score 12

Actual grade:		
	Failed	- score 9
	Low	- " 10
	Medium	- " 11
	High	- " 12

Possible range of scores for a child at this level: $\frac{9}{12}$ to $\frac{12}{12}$ = 0.75 to 1.0

Students attending post-secondary schools were given grades on the basis of the actual number of years of study (13 plus).

(4) The family score was calculated by accumulating all the scores given for the actual grades its children achieved at their respective stages of schooling divided by the maximum possible scores they could achieve at their respective stage, i.e.,

$$\frac{\text{Sum of actual grades}}{\text{Sum of maximal scores}} = \text{Family score}$$

For example, a family with three children of school age, one in stage A with medium achievement (score 3 out of a possible 4), the second in stage B with low achievement (score 6 out of a possible 8), and the third in stage C with high achievement (score 12 out of a possible 12) will have a family score as follows: $\frac{3}{4} \quad \frac{6}{8} \quad \frac{12}{12} = 0.87$

The family score was multiplied by 100, giving scores ranging between 25 and 100. The mean achievement was 81.9, the median was 82.8 and the mode was 75.0. It should be noted, however, that there is an upward bias of the achievements, since it is impossible to obtain the score of zero on this scale. If, for instance, a child failed in first grade, he would nevertheless receive the lowest score of that stage, namely, 1.

When the family scores were grouped, the following distribution was obtained:

Table II.3: Distribution of Family Score in the Population Studied

Family score		N	%
Level	Score		
Low	25.0 - 70.9	19	14.96
Medium	21.0 - 80.9	37	29.13
Medium-High	81.0 - 90.9	42	33.07
High	91.0 - 100.0	29	22.83
Total		127	99.99%

(5) At a more advanced stage of assessing the data, another attempt was made to calculate the family score, with the objective of improving the index, since we had reservations about the index stemming from its upward bias. The greater the number of children in a family, the greater the chance that the family will receive a high score (despite the downward tendency of scholastic achievements as the age increases). A new calculation was made, based on a standard score. It takes into account the child's grade relative to his age group only, omitting both the type of educational framework and the class in which he was at the time. The formula for the standard score is:

$$\frac{\text{Mean of age group - child's grade}}{\text{Standard deviation of age group}} = \text{Standard score of child in age group}$$

The new index is the mean of the standard scores of the children of each family which constituted a new dependent variable.

The correlation between family score A and family score B is .79. An experimental examination indicated that the correlations with the independent variables are generally higher for family score B than for family score A. However, this trend is not consistent. For a number of variables, the correlations are lower for family score B. After careful examination, it was decided that the consistency in family score A makes it more suitable for use in this study, and this is the score presented throughout the report.

III. LIFE-STYLE

Table III. 1: Family Score by its Religious Self-Definition and Family Meal on Saturdays

Family's self-definition	No family meal on Saturdays		Family meal on Saturdays	
	%	N	%	N
Religious	73.0	4	84.8	29
Traditional	75.0	2	85.6	33
Secular	83.0	1	81.5	24
Total	25.0%	7	83.4%	86

Table III. 2: Family Score by its Religious Self-Definition and Saturdays Spent with Family

Family's self-definition	Saturdays not spent with family		Saturdays spent with family	
	%	N	%	N
Religious	73.2	4	85.6	23
Traditional	74.0	2	84.4	30
Secular	79.0	2	80.8	24
Total	74.8	8	83.6	77

Table III. 3: Family Score by its Religious Self-Definition and Weekday Family Gatherings (Afternoon or Evening)

Family's self-definition	Family score where there are no family gatherings		Family score where there are family gatherings	
	%	N	%	N
Religious	82.0	9	87.4	16
Traditional	80.1	6	86.0	28
Secular	77.1	9	83.4	17
Total	79.7	24	85.6	61

Table III.4: Family Rituals on the Guttman Scale

Four of the rituals were scaled on the Guttman scale with a coefficient of reproducibility of .96; the scaled arrangement is presented in the following Table:*

Meal on Friday night/Saturday		Saturdays spent with family		Daily family gathering		Children's birthdays celebrated at home	
Yes	No	Yes	No	Yes	No	Yes	No
32	0	32	0	32	0	32	0
41	1	42	0	38	4	5	37
11	0	11	0	0	11	0	11
3	2	1	4	1	4	0	5
0	2	0	2	0	2	0	2

* The scaling is based on 92 families out of the 177 families studied, as these were the only families from whom the full, relevant information could be obtained.

IV. ORGANIZATION AND ALLOCATION OF TIME

Table IV. 1: Average Number of Hours Allocated to Various Activities by Size of Family and Family Categories

No. of family members in household	Activities					
	Housework		Shopping		Activities with the children	
	Mother	Father	Mother	Father	Mother	Father
4	4.1	0.23	0.58	0.18	3.9	1.8
5	5.1	0.09	0.75	0.10	3.9	1.3
6	5.1	0.16	0.72	0.09	4.2	1.2
7	5.4	0.18	0.77	0	3.6	0.5
8	6.2	0.20	0.66	0	2.4	1.0
9	5.9	0	0.75	0.54	3.3	0.25
10	7.0	0	1.00	0	1.6	0
11	7.0	0.60	2.00	0	5.0	0
N	115	106	100	94	94	92

Table IV. 2: Correlation Between Selected Variables and Employment of Mother

Variables	Regression I Mother's employment	Regression II Mother's employment
No. of persons in household	-.21	-.41
Time spent on housework	-.43	-.69
Activities with the children	-.29	-.40
Weekly schedule	.12	.13
Family score	.15	.21

Table IV.3: Stepwise Regression and Correlations by Family Score (number of household members introduced as the first variable)

Variables	Variance accounted for in regression on the basis of pairwise correlations	Correlation with family achievement scores
No. of household members	3.5%	-.18
Administrative functions outside the house	10.5%	-.33
Weekly schedule	5.2%	.29
Time spent on housework	2.8%	.02
Time spent on personal affairs	0.8%	-.07
Time spent watching TV	All contribute 1% - 1.5% or less	.21
Mother works		.15
Daily schedule		.15
Time for entertainment, etc.		-
Total variance accounted for	31.6%	

V. ORGANIZATION OF SPACE

Table V.1: Family Members Not Having the Use of a Separate Bed, by Family Size

Family members without use of separate beds	Family Size								Total	N
	4	5	6	7	8	9	10	11+		
Children without separate beds	4.8	11.8	21.3	42.3	23.4	59.8	96.7	89.5	35.8	485
Parents without separate beds	4.8	8.5	22.9	24.0	-	20.0	25.0	-	13.5	221

Table V.2: t and F Tests to Examine the Significance of the Differences between Mean Scores in Families where the Children have Different Opportunities for Privacy

Variable	Type of Test	t and F Values	α
Privacy for children as a group	t (N = 122)	-.53	.60
Privacy for young children as a group	t (N = 120)	-.01	.99
Privacy for boys as a group	t (N = 110)	-.68	.50
Privacy for girls as a group	t (N = 107)	-1.27	.21
Separate bedrooms for adults and children	F(N = 123)	1.96	.15
Separate beds for each child	F(N = 120)	.818	.44

VI. ORGANIZATION AND USE OF MANPOWER

Table VI.1: Patterns of Division of Labour in Each Task by Category (in percentages)

Tasks / Category	Internal Tasks								External Tasks						% of tasks performed by each category out of the total tasks performed
	Household Tasks					Care of Children			Care of Children						
	Laundry & Ironing	Basic house cleaning	Daily house cleaning	Other daily house-work	Local grocery shopping	Physical care	Baby-sitting	Help with home-work	Taking to & from health services	Attending parent-teacher meetings	Taking to & from school/kin-dergarten	Market shopping	Adminis-trative matters	Earning liveli-hood	
Wife	81.9	72.8	64.4	47.8	46.5	42.6	32.2	12.5	74.9	54.6	79.7	21.0	18.5	2.5	45.6
Husband	--	0.7	0.7	--	9.2	--	3.6	20.9	2.2	23.1	7.5	50.0	56.0	68.3	7.9
Children	0.7	2.9	0.7	--	5.6	0.7	11.4	27.8	--	0.7	3.8	1.5	--	--	3.1
Partial Total	82.6	76.4	65.8	47.8	61.3	43.3	47.2	61.2	77.1	78.4	91.0	72.5	74.5	70.8	66.6
Wife-husband	9.4	5.9	4.9	15.2	7.7	32.5	17.9	13.9	19.4	21.7	1.8	25.4	25.8	29.2	17.5
Wife-children	7.3	17.7	27.3	28.8	26.8	19.2	20.7	7.0	2.9	--	5.6	0.7	--	--	12.2
Husband-children	--	--	--	--	0.7	--	2.1	8.3	--	--	1.8	1.5	--	--	0.7
Wife-husband-children	0.7	--	2.1	8.3	3.5	5.3	12.2	9.7	0.7	--	--	--	--	--	3.0
Partial Total	17.4	23.6	34.3	52.3	38.7	57.0	52.9	38.9	23.0	21.7	9.2	27.6	25.8	29.2	33.3
Total	100.0%	100.0%	100.1%	99.9%	100.0%	100.3%	100.1%	100.1%	100.1%	100.1%	100.2%	100.1%	100.3%	100.0%	100.0%
N	138	136	143	146	142	181	140	72	139	143	53	138	136	161	

Table VI.2: Summary of Patterns of Division of Labour in Each Task by Category (in percentages)*

Tasks / Category	Internal Tasks								External Tasks					
	Household Tasks					Care of Children			Care of Children					
	Laundry & Ironing	Basic house cleaning	Daily house cleaning	Other daily house-work	Local grocery shopping	Physical care	Baby-sitting	Help with home-work	Taking to & from health services	Attending parent-teacher meetings	Taking to & from school/kin-dergarten	Market shopping	Adminis-trative matters	Earning liveli-hood
Wife	99.3	96.4	96.7	99.9	84.5	99.6	83.0	43.1	97.9	76.3	87.1	47.1	44.3	31.7
Husband	10.1	6.6	7.7	23.5	21.1	37.8	35.8	52.8	22.3	44.8	11.1	76.9	81.8	97.5
Children	8.7	20.6	30.1	37.1	36.6	25.2	46.4	52.8	3.6	0.7	11.2	3.7	-	-

*These figures sum up each family member's participation whether alone or in cooperation with another family member.

Table VI.3: Correlation Coefficients between Number of Members of Household and Number of Categories of Participants in Household Tasks (N = 177) *

Correlation Coefficients	TASKS										
	Weekly cleaning	Daily cleaning	Other house-work	Washing & ironing	Grocery-store shopping	Market shopping	Physical care of children	Taking children to & from kinder-garten	Taking children to & from health services	Baby sitting	Help with home-work
N	146	151	154	147	152	152	160	116	148	156	99
Correlation Coefficient	.28	.32	.18	.11	-.05	-.03	.13	-.40	-.06	.32	-.14
α	0.001	0.001	0.01				0.05	0.001		0.001	

* It should be noted that some of the low correlations may be due to two reasons:

1) A methodological problem connected with the way in which the data were collected. In the present analysis the maximal number of participants is always 3, since the categories of participation are father, mother and children. In practice, however, the category of children may include several participants. A more detailed recording of data about all the children (or other members of the family, such as grandmother, aunt, etc.) could provide a clearer picture and increase the significance.

2) Another reason for the lower correlation between the number of participants in activities and the number of members of the household is the leveling arising from the decline in participation of husband and wife in household tasks and the increase in the children's participation as the number of members of the family increases.

Table VI. 4: Correlation Coefficients Between Number of Members of Household and Number of Categories of Participants in Household Tasks (N = 177)

Correlation Coefficients	TASKS										
	Weekly cleaning	Daily cleaning	Other house-work	Washing & ironing	Grocery-store shopping	Market shopping	Physical care of children	Taking children te & from kinder-garten	Taking children to & from health services	Baby-sitting	Help with home-work
N	102	107	109	103	108	106	111	74	101	108	87
Correlation Coefficient	-. 05	-. 02	. 18	. 09	. 08	0. 04	. 16	. 03	. 06	-. 08	0. 004
α			0. 03				0. 04				

Table VI.5: Family Score, by Number of Tasks Performed by each Family Category (Husband, Wife, Children) and Correlation Between Family Score and Number of Tasks

Task Performing Category	NUMBER OF TASKS: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Correlation Coefficient	
Wife	(2) 95.0	(3) 71.7	(1) 82.0	(1) 85.0	(1) 75.0	(4) 85.7	(3) 71.0	(2) 64.5	(16) 80.2	(23) 80.3	(25) 80.0	(17) 80.9	(17) 87.3	(17) 92.3	(7) 87.6	.16	α 0.03
Husband	(9) 19.6	(6) 82.2	(18) 81.1	(13) 79.9	(19) 80.9	(12) 82.7	(14) 80.5	(19) 81.7	(8) 88.4	(3) 83.0	(1) 69.0	(5) 92.6	--	--	--	.11	0.11
Children	(37) 79.3	(14) 77.6	(26) 85.2	(10) 78.3	(10) 85.6	(8) 85.9	(9) 87.4	(7) 86.4	(2) 76.0	(2) 68.5	(2) 81.0	--	--	--	--	.11	0.11

Table VI.6: Correlation Between Family Score and Number of Tasks Performed by each Family Category when the Number of Members of the Household is Held Constant

Wife = τ = .12 α = 0.09

Husband = τ = .06 α = 0.26

Children = τ = .23 α = 0.006